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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/774,180

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Sanjay K. Sancheti

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EXAMINER

LE, DINH THANH

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,180

Applicant(s)

SANJAY K. SANCHETI

Examiner

DINH T. LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☒ This action is **FINAL**. *SL* 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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FINAL REJECTION

Claim Rejections

Claim Rejections - 35 USC § 112

Claims 1-23 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 1, it is unclear when ‘in a delay lock loop mode and a phase locked loop mode’ will be happened and how the phase detector and the phase frequency detector can recognize the modes.

In claim 3, it is unclear how the modes can be switched since no means for performing the switching function is recited.

In claim 10, it is not understood how the delay blocks can be “configured” as recited on line 4 and how the generator can be “operated” as a voltage controlled oscillator on line 7 and what the “coarse adjustment” and “fine adjustment” are and how these adjustments can be performed.

In claim 12, it is unclear what the “coarse match” is and when it can be encounter and how the phase detector can be used. The same is true for claim 13.

In claim 15, it is not understood how the phase generator can be “configurable” in a first mode and a second mode and how the generator can coupled to the detectors since no means for performing the coupling function is recited and the generator cannot perform the coupling function. The description is incomplete because the claimed loop circuit does not have an input /output. Thus, the claimed loop circuit may not perform the recited function.

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In claim 16, the description of the present invention is incomplete because the phase detector is not connected to anything. Thus, the claimed detector may not perform the recited function. The same is true for claim 20.

In claim 19, it is unclear how the control signal can change the first mode and the second mode since the phase detector is not connected to anything.

The remaining claims are dependent from the above claims and therefore also considered indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 10 is rejected under 35 USC 102 (b) as being anticipated by Kurd (US 6,043,717).

Kurd discloses a circuit in Figures 2-4 comprising:

Kurd discloses in Figures 2-4 comprising:

- a configurable phase generator (225) having delay blocks being configured to operate as a delay loop mode to perform coarse adjustment and a voltage controlled oscillator in a phase locked mode for a fine adjustment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-5, 8-17 and 19-23 are rejected under 35 USC 103 (a) as being unpatentable over Dunn (US 4,069,462) in view of Kurd (US 6,043,717).

As the best construed, Dunn discloses in Figure 2 a circuit comprising:

- a phase detector (19);
- a frequency detector (18);
- a voltage controlled oscillator (17); and
- wherein the circuit is configured to operate a DLL mode and a PLL mode.

However, Dunn does not disclose that the VCO (17) operates as a VCO and as a voltage controlled delay line.

Kurd discloses in Figures 2-4 comprising:

- a configurable phase generator (225) being configured to operate as a delay loop mode to perform coarse adjustment and a voltage controlled oscillator in a phase locked mode for a fine adjustment for reducing space, cost and complexity, see lines 23-30, column 3.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the configurable phase generator taught by Kurd in the circuit of Dunn for the purpose reducing size, cost and complexity.

With regard to claims 9, 14 and 23, the skew of the phases of the input signal(XCLK) would be suppressed.

Claims 6-7 and 18 are rejected under 35 USC 103(a) as being unpatentable over Dunn (US 4,069,462) in view of Kurd (US 6,043,717) and further in view of Paakinson (JP404227314A).

Dunn in view of Kurd discloses a circuit with all of the limitations of the base claims as stated above but does not disclose that each delay block is associated with a multiplexer.

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Paakinson teaches in Figure 4 a selectable delay line comprising a cascaded delay elements each having a multiplexer (20) coupled to a respective delay (RD) for providing widely selectable delay times through the adjustment of input resistors (rd), see the Abstract. It would have been obvious to a person having skill in the art at the time the invention was made to employ the delay line taught by Paakinson in the modified circuit of Dunn for the purpose of widely selecting delay times through the adjustment of the input resistors.

Response to Applicant's Arguments

The applicant argues that one of ordinary skill in the art would understand claims 1-23. the argument is not persuasive because the applicant does not provide clarification.

The applicant argues that Kurd does not teach a method comprising “configured an element as a voltage controlled delay line in an delay locked mode to perform coarse adjustment and fine adjustment” in “particular sequence” as recited in claim 10. The argument is not persuasive because limitation “in particular sequence” is not recited in the claims. Moreover, the circuit in Figures 2-4 of Kurd show that it operates in DLL mode and PLL mode.

The applicant argues that combining the Dun with Kurd is improper because it would change the principle of operation of Dunn. The argument is not persuasive because both inventions are analogous art and the VCO of Dun can be replaced with the VCO of Kurd.

The applicant argues that modified circuit of Dunn in view of Kurd does not suggest first and second output signals of a phase generator. The argument is not persuasive because the recitation “ first and second output signals” is not recited in claim 1. Moreover, the VCO of Kurd also generates a first output signal in a DLL mode and a second output signal in a PLL

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mode.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DINH LE
Primary Examiner

A handwritten signature in black ink, appearing to read 'Dinh Le', with a long horizontal flourish extending to the right.